

Fact Sheet

Danfoss Advanced Active Filter AAF 007 – the intelligent choice for harmonic mitigation



Talented

Enjoy harmonic mitigation, power factor correction and imbalance compensation, all in one product.

You can adjust the settings to your needs and put focus on the area that is important in your application.

Selective harmonic mitigation and automatic resonance detection ensure reliable operation tailored to your application requirements.

The Danfoss Advanced Active Filter AAF 007 is designed to reduce harmonic distortion of Danfoss drives. The newest-generation SiC switches give

unmatched high efficiency and effective elimination of high-order harmonics. The filter is compatible for use with any drive from the entire Danfoss product portfolio.

Plug and play

The filter is delivered pre-configured and tuned from factory, ready to use with the accompanying current transducers.

Versatile

Suitable for central or decentral harmonic mitigation.

60%

lower power losses compared to similar filters

Feature	Benefit
Compact modular design <ul style="list-style-type: none"> – Low module weight of 18 kg – Uniquely compact – Scaling of up to 8 modules in one product utilizing the same current measurements 	Reduces space requirement
Easy serviceability <ul style="list-style-type: none"> – Few service parts – Easy exchange of modules due to low weight – Fast exchange of filter modules through Danfoss Service 	Reduces service time and cost
Resonance control <ul style="list-style-type: none"> – Automatic detection of resonances – Adaptation of switching frequency allows continuous operation without shutdown 	Improves uptime
Versatile: One product manages 3 power quality challenges <ul style="list-style-type: none"> – Focus on current harmonic mitigation, load balancing, power factor correction or all simultaneously – Possible focus on individual harmonics mitigation 	Fewer components required, reduces complexity
Efficient operation <ul style="list-style-type: none"> – Lower running expenses – Longer lifetime of unit – High robustness in harsh environments 	Reduces total cost of ownership
Simple commissioning <ul style="list-style-type: none"> – Plug and play with delivered current transducer from factory – Easy optional parametrizing via PC software and RS485 	Get up and running fast

Setup software

Danfoss AAF 007 Setup Tool offers monitoring of the power network quality and adjustment to Danfoss Advanced Active Filter AAF 007 parameters.

Application specifics like sensor location and current transducer setup, but also compensation priority and compensation force can be adjusted.

Validation of harmonic compliance

Use the MyDrive® Harmonics tool to determine whether harmonics will be an issue in your installation, when drives are installed. MyDrive® Harmonics shows you the benefits of employing harmonic mitigation solutions from the Danfoss product portfolio and calculates system harmonic distortion. Furthermore, the software gives you a quick indication of whether the installation complies with the most recognized harmonic norms and recommendations.

To find all software tools, go to MyDrive® Suite:

<http://mydrive.danfoss.com/>

Retrofit without dismantling existing installation

Danfoss Advanced Active Filters are easily retrofitted to existing installations, where harmonics are increased due to use of additional non-linear loads such as variable speed drives.

Specifications

Mains voltage (L1, L2, L3)	
Voltage range	3 x 380-480 V AC
Current ratings	35 A/55 A modules
Maximum current	440 A (8 modules)
Supply frequency	50/60 Hz ±2%
Compensation	Harmonic mitigation 2 nd to 60 th order Power factor correction Imbalance compensation
Current transducer (CT) accuracy	0.5 or more
Standard and requirements	EC/EN 61000-2-2 / -4 IEC/EN 61000-3-2 / -4 / -12 IEEE 519-2014 G5/4
Switching on output	60 kHz unlimited
Efficiency	
Power loss	556 W (35 A) 833 W (55 A) 6664 W (440 A)
Current rating	
Rating	35 A/55 A
Maximum rating	440 A (8 filters in parallel)
Communication interface	
PC communication	RS485 based
System communication	Can bus
Environmental conditions and built-in options	
Enclosures (side-by-side mounting)	35 A: IP20 55 A: IP20 110-440: IP20/IP54
Ambient temperature	40 °C without derating
Humidity	5-95% (non-condensing) during operation
Altitude	<1000 m, derating 5%/1000 m, max 4000 m
Built-in options	Contactors for modules in IP54 cabinet

>98.2%

Filter efficiency
using advanced
SiC technology